Westbrook School Department **Cumberland County** **Westbrook, Maine** **A-114-71-F-N**	**Departmental** **Findings of Fact and Order** **Air Emission License** **After-the-Fact**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

The Air Emission License for Westbrook School Department of Westbrook, Maine expired on October 11, 2005. Westbrook School Department has applied to renew their expired license permitting the operation of emission sources associated with their educational facilities.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Fuel Burning Equipment

Equipment	**Maximum Capacity (MMBtu/hr)**	**Maximum Firing Rate**	**Fuel Type, % sulfur**	**Equipment Location**
Boiler WH1	8.28	8,118 scf/hr	Natural gas	High School
Boiler WH2	8.28	8,118 scf/hr	Natural gas	High School
Boiler CS1	2.5	2,451 scf/hr	Natural gas	Canal School
Boiler CS2	2.5	2,451 scf/hr	Natural gas	Canal School
Generator CS1	0.7	5.2 gal/hr	Diesel, 0.05%	Canal School
Boiler VS1	8.5	61 gal/hr	#2 fuel oil, 0.35%	Vocational School
Generator VS1	1.6	11.7 gal/hr	Diesel, 0.05%	Vocational School
Boiler SO1	1.3	9.3 gal/hr	#2 fuel oil, 0.35%	Superintendent's Office

Westbrook School Department also operates parts washers in their various school buildings.

C. Application Classification

The previous air emission license for Westbrook School Department expired on October 11, 2005. A complete application was not submitted on time, therefore Westbrook School Department is considered to be an existing source applying for an after-the-fact renewal. The Department has determined the facility is a minor source and the application has been processed through Chapter 115 of the Department's regulations.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas. BPT for an after-the-fact renewal requires an analysis similar to a Best Available Control Technology analysis per Chapter 115 of the Department's regulations.

B. Boilers

Westbrook School Department operates six boilers in various buildings at their facility. The boilers consist of four natural gas fired boilers: Boilers WH1 and WH2, each rated at 8.28 MMBtu/hr, and Boilers CS1 and CS2, each rated at 2.5 MMBtu/hr; and two #2 fired boilers: Boilers VS1 and SO1, with maximum heat inputs of 8.5 and 1.3 MMBtu/hr respectively. The boilers are not subject to New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr and manufactured after June 9, 1989.

A summary of the BPT analysis for the boilers is the following:

1. The firing of #2 fuel with a maximum sulfur content not to exceed 0.35% by weight in Boilers VS1 and SO1.
2. PM emission limits for Boilers CS1, CS2 and SO1 are based on AP-42 data for natural gas combustion dated 7/98 and for fuel oil combustion dated 9/98. PM emission limits for Boilers WH1, WH2 and VS1 are regulated by MEDEP Chapter 103 because the boilers are larger than 3.0 MMBtu/hr in size, however in this case the BPT analysis determines more stringent limits of 0.05 lb/MMBtu for natural gas fired boilers and 0.08 lb/MMBtu for oil fired boilers are appropriate and shall be used. PM_{10} limits for all the boilers are derived from the PM calculations.
3. NOx emission limits for the fuel oil fired boilers are based on data from similar boilers firing #2 fuel. Emission limits for the natural gas fired units are based on AP-42 data for natural gas combustion.

4. SO_2 emission limits for Boilers WH1, WH2, CS1 and CS2 are based on AP-42 data for natural gas combustion dated 7/98.
5. CO and VOC emission limits are based on AP-42 data for natural gas combustion dated 7/98 and for fuel oil combustion dated 9/98.
6. Visible emissions from the stacks of boilers WH1, WH2, CS1 and CS2 shall each not exceed 10% opacity on a 6-minute block average.
7. Visible emissions from the stacks of each of Boilers VS1 and SO1 shall not exceed 20% opacity on a 6-minute block average.

C. Generators

Westbrook School Department operates two back up emergency diesel generators. Generator CS1 is located in the Canal School and has a maximum heat input of 0.7 MMbtu/hr. Generator VS1 is located in the Vocational School and has a maximum heat input of 1.6 MMBtu/hr. Each generator shall be limited to 500 hours of operation per 12-month rolling year. An emergency shall be defined according to MEDEP Chapter 148:

> "Emergency" means an electric power outage due to a failure of the electrical grid, on-site disaster, local equipment failure, or public service emergencies such as flood, fire, natural disaster. Emergency shall also mean when the imminent threat of a power outage is likely due to failure of the electrical supply or capacity deficiencies result in a deviation of voltage from the electrical supplier to the premises of three percent (3%) above or five percent (5%) below standard voltage.

A summary of the BPT analysis for the generators is the following:

1. The emergency generators shall fire only diesel fuel with a maximum sulfur content of 0.05% by weight.
2. Each emergency generator shall be limited to 500 hours/year of operation based on a 12-month rolling total.
3. PM_{10}, NOx, CO, and VOC emission limits are based upon AP-42 data dated 10/96. PM emission limits are derived from the PM_{10} limits.
4. Visible emissions from each emergency generator shall not exceed 20% opacity on a 6-minute block average, except for no more than two 6-minute block averages in a 3-hour period.

D. Parts Washers

Westbrook School Department shall meet the requirements of MEDEP Chapter 130 with regard to the facility's applicable Parts Washers.

E. Annual Emissions

Westbrook School Department shall be restricted to the following annual emissions, based on a 12 month rolling total. Emissions were calculated based on the following:

- A fuel limit of 26,000,000 scf of natural gas to be fired in Boilers WH1, WH2, CS1 and CS2;
- Continuous operation of Boilers VS1 and SO1, firing #2 fuel with a sulfur content of 0.35%; and,
- 500 hours of operation for each of Generator CS1 and Generator VS1, firing diesel fuel with a sulfur content of 0.05%.

Total Licensed Annual Emission for the Facility
Tons/year
(used to calculate the annual license fee)

	PM	**PM_{10}**	**SO_2**	**NOx**	**CO**	**VOC**
Natural gas fired Boilers	0.67	0.67	0.01	1.3	1.01	0.08
Boiler VS1	2.98	2.98	13.13	13.04	1.33	0.06
Boiler SO1	0.06	0.06	2.01	2.00	0.21	0.01
Generator CS1	0.06	0.06	0.01	0.78	0.17	0.07
Generator VS1	0.13	0.13	0.03	1.77	0.38	0.14
Total TPY	**3.9**	**3.9**	**15.19**	**18.89**	**3.10**	**0.36**

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Based on the above total facility emissions, Westbrook School Department is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-114-71-F-N subject to the following conditions:

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 MRSA §347-C).

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [MEDEP Chapter 115]

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [MEDEP Chapter 115]

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [MEDEP Chapter 115]

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [MEDEP Chapter 115]

(6) The license does not convey any property rights of any sort, or any exclusive privilege. [MEDEP Chapter 115]

(7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [MEDEP Chapter 115]

(8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records

for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [MEDEP Chapter 115]

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [MEDEP Chapter 115]

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [MEDEP Chapter 115]

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
   1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
   2. pursuant to any other requirement of this license to perform stack testing.

B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and

C. submit a written report to the Department within thirty (30) days from date of test completion.

[MEDEP Chapter 115]

(12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to

the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[MEDEP Chapter 115]

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [MEDEP Chapter 115]

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [MEDEP Chapter 115]

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [MEDEP Chapter 115]

SPECIFIC CONDITIONS

(16) **Boilers WH1, WH2, CS1, CS2, VS1 and SO1**

A. Total fuel use for Boilers WH1, WH2, CS1 and CS2 shall not exceed 26,000,000 scf of natural gas on a 12-month rolling total. Compliance shall be demonstrated by fuel records showing the quantity of fuel used on a monthly and 12-month rolling total basis. [MEDEP Chapter 115, BPT]

B. Boilers VS1 and SO1 shall fire #2 fuel oil with a sulfur content not to exceed 0.35% by weight. Compliance shall be demonstrated by receipts showing the sulfur content of the fuel. [MEDEP Chapter 115, BPT]

C. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler WH1	PM	0.05	MEDEP, Chapter 115, BPT
Boiler WH2	PM	0.05	MEDEP, Chapter 115, BPT
Boiler VS1	PM	0.08	MEDEP Chapter 103, Section 2(B)(1)(a)

D. Emissions shall not exceed the following [MEDEP Chapter 115, BPT]:

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NOx (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler WH1	0.42	0.42	0.01	0.82	0.69	0.05
Boiler WH2	0.42	0.42	0.01	0.82	0.69	0.05
Boiler CS1	0.02	0.02	0.01	0.25	0.21	0.02
Boiler CS2	0.02	0.02	0.01	0.25	0.21	0.02
Boiler VS1	0.68	0.68	3.00	2.98	0.31	0.02
Boiler SO1	0.02	0.02	0.46	0.46	0.05	0.01

E. Visible emissions from the stacks of boilers WH1, WH2, CS1 and CS2 shall each not exceed 10% opacity on a 6-minute block average. [MEDEP Chapter 101]

F. Visible emissions from the stacks of each of Boilers VS1 and SO1 shall not exceed 20% opacity on a 6-minute block average. [MEDEP Chapter 101]

(17) **Generators CS1 and VS1**

A. Westbrook School Department shall limit Generator CS1 to 500 hours/year of operation and Generator VS1 to 500 hours/year of operation (based on a 12-month rolling total). Hour meters shall be maintained and operated on the emergency generators. [MEDEP Chapter 115, BPT]

B. Generators CS1 and VS1 shall be operated for emergency purposes only or for short periods to exercise the units and to keep them in operating order. A log shall be maintained and updated each time either of the generators run, documenting the date, time, and reason for operation. [MEDEP Chapter 115, BPT]

C. Generators CS1 and VS1 shall fire diesel fuel with a sulfur content not to exceed 0.05% by weight. Compliance shall be based on fuel records from the supplier indicating that sulfur content is less than 0.05% or that the fuel delivered is on-road diesel. [MEDEP Chapter 115, BPT]

D. Emissions shall not exceed the following [MEDEP Chapter 115, BPT]:

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NOx (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator CS1	0.22	0.22	0.04	3.09	0.67	0.25
Generator VS1	0.50	0.50	0.09	7.06	1.52	0.56

E. Visible emissions from each generator shall not exceed 20% opacity on a 6-minute block average, except for no more than two 6-minute block averages in a 3-hour period. [MEDEP Chapter 101]

(18) **Parts Washer**

Parts washers at Westbrook School Department are subject to MEDEP Chapter 130.

A. Westbrook School Department shall keep records of the amount of solvent added to each parts washer. [MEDEP Chapter 115, BPT]

B. The following are exempt from the requirements of Chapter 130 [MEDEP Chapter 130]:
   1. Solvent cleaners using less than two liters (68 oz) of cleaning solvent with a vapor pressure of 1.00 mmHg, or less, at 20° C (68° F);
   2. Wipe cleaning; and,
   3. Cold cleaning machines using solvents containing less than or equal to 5% VOC by weight.

C. The following standards apply to remote reservoir cold cleaning machines that are applicable sources under Chapter 130.
   1. Westbrook School Department shall attach a permanent conspicuous label to each unit summarizing the following operational standards [MEDEP Chapter 130]:
      (i) Waste solvent shall be collected and stored in closed containers.
      (ii) Cleaned parts shall be drained of solvent directly back to the cold cleaning machine by tipping or rotating the part for at least 15 seconds or until dripping ceases, whichever is longer.
      (iii) Flushing of parts shall be performed with a solid solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure that does not exceed 10 psig. Flushing shall be performed only within the freeboard area of the cold cleaning machine.
      (iv) The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.
      (v) Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the degreaser.
      (vi) When a pump-agitated solvent bath is used, the agitator shall be operated to produce no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
      (vii) Spills during solvent transfer shall be cleaned immediately. Sorbent

material shall be immediately stored in covered containers.

(viii) Work area fans shall not blow across the opening of the degreaser unit.

(ix) The solvent level shall not exceed the fill line.

2. The remote reservoir cold cleaning machine shall be equipped with a perforated drain with a diameter of not more than six inches. [MEDEP Chapter 130, BPT]

(19) Westbrook School Department shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 MRSA §605).

(20) **Payment of Annual License Fee**
Westbrook School Department shall pay the annual air emission license fee within 30 days of July 31st of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAVID P. LITTELL, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: January 10, 2006
Date of application acceptance: February 6, 2006

Date filed with the Board of Environmental Protection: _____

This Order prepared by Rachel E. Pilling, Bureau of Air Quality.